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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,474	01/31/2002	Steven Teig	SPLX.P0097	3694

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EXAMINER

ORTIZ, BELIX M

ART UNIT PAPER NUMBER

2164

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/061,474

Applicant(s)

TEIG ET AL.

Examiner

Belix M. Ortiz

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03/24/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/24/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Remarks

1. In response to communications files on 25-March-2005, claims 24-25 are added; the specification of the disclosure, and claims 1-2, 10, 12 and 22 are amended per applicant's request. Therefore, claims 1-25 are presently pending in the application.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Pedersen et al. (U.S. 6,134,705).

As to claim 1, Pedersen et al. teaches a data storage structure that stores a plurality of sub-networks (see column 11, lines 44-60), wherein each sub-network performs a set of output functions, wherein each sub-network comprises a set of circuit elements and at least some of the sub-network comprise first circuit having a first output outside the sub-network and a second circuit having a second output outside the sub-network, wherein the first circuit receives a direct or indirect input from the second circuit, wherein each sub-network is stored based on a set of indices derived from a set of

output functions performed by the sub-network (see figures 7A-7F; column 1, lines 37-44; column 11, lines 40-60; column 12, lines 10-15; lines 43-45 and column 16, lines 21-39).

As to claim 2, Pedersen et al. teaches a data storage structure that stores a plurality of sub-networks (see column 11, lines 44-60), wherein each sub-network performs a set of output functions, wherein each sub-network performs a set of output functions, wherein each sub-network comprises a set of circuit elements and at least some of the sub-network comprise first circuit having a first output outside the sub-network and a second circuit having a second output outside the sub-network, wherein the first circuit receives a direct or indirect input from the second circuit, wherein the data storage structure stores each sub-network based on a parameter derived from the set of output functions of the sub-network (see figures 7A-7F; column 1, lines 37-44; column 11, lines 40-60; column 12, lines 10-15; lines 43-45 and column 16, lines 21-39).

As to claims 3 and 14, Pedersen et al. teaches wherein the parameter for each sub-network is a set of indices for storing the sub-network in the storage structure, wherein the set of indices includes an index for each function performed by the sub-network (see figures 4A-4B and 7A; column 1, 37-44; column 6, lines 29-35; column 6, lines 54-59; column 9, lines 28-36; and column 9, lines 41-49).

As to claims 4 and 15, Pedersen et al. teaches wherein the indices are numerical indices (see column 3, 16-18).

As to claims 5 and 16, Pedersen et al. teaches wherein the storage structure is a relational database, and the set of indices are indices into the relational database (see column 11, lines 62-66).

As to claims 6 and 17, Pedersen et al. teaches wherein the set of indices for each sub-network includes a primary index and a set of secondary indices (see figure 7D, characters 762, 764, 766, and 776).

As to claims 7 and 18, Pedersen et al. teaches wherein the set of secondary indices for a sub-network that only performs one function is empty (see column 14, lines 63-67 and column 15, lines 1-7).

As to claims 8 and 19, Pedersen et al. teaches wherein each sub-network receives a set of inputs, and each sub-network's primary index is the index derived from a pivot function of the sub-network that depends on all the inputs in the sub-network's set of inputs (see column 15, lines 10-22).

As to claim 9, Pedersen et al. teaches wherein each sub-network's set of indices

specify the location where the sub-network is stored in the data storage structure (see column 14, lines 49-62).

As to claims 10 and 22, Pedersen et al. teaches wherein the data storage structure stores each sub-network in terms of

(i) a graph that represents the topology of the set of circuit elements of each sub-network, wherein the graph includes a node for each circuit element of the sub-network,

(ii) a set of local functions that includes a local function for each node of the graph (see figure 7A and column 1, lines 37-44, where the sub-netlist (element 700) includes element 702-740, and figure 7E where a set of local functions include the functions at nodes u and v,

wherein the data storage structure stores, for each sub-network, an identifier that specifies the locations that store the set of local functions and the graph of the sub-network (see column 11, lines 62-66),

wherein each sub-network's set of indices is associated with the identifier for the sub-network (see figures 4A-4B; column 11, lines 62-66; column 12, lines 10-15; column 12, lines 43-45; column 13, lines 28-38; and column 13, lines 43-54).

As to claims 11 and 23, Pedersen et al. teaches wherein each sub-network's identifier includes a graph index and a set of function indices, wherein, for each sub-network, the graph index identifies the storage location of the graph for the sub-network,

and each function index identifies the storage location of a local function of the sub-network (see figures 4A-4B; column 6, lines 29-35; and column 6, lines 54-59).

As to claim 12, Pedersen et al. teaches a sub-network record management system comprising:

a) a data storage structure that stores a plurality of sub-networks, wherein each sub-network performs a set of output functions (see column 11, lines 44-60), wherein each sub-network performs a set of output functions, wherein each sub-network comprises a set of circuit elements and at least some of the sub-network comprise first circuit having a first output outside the sub-network and a second circuit having a second output outside the sub-network, wherein the first circuit receives a direct or indirect input from the second circuit, wherein the data storage structure stores each sub-network based on a parameter derived from the set of output functions of the sub-network (see figures 7A-7F; column 1, lines 37-44; column 11, lines 40-60; column 12, lines 10-15; lines 43-45 and column 16, lines 21-39),

b) a data access manager that identifies and retrieves sub-networks from the data storage structure (see figure 3A, character 314 and column 10, lines 40-50).

As to claim 13, Pedersen et al. teaches wherein when the data access manager receives a parameter, the manager searches the data storage structure for sub-networks that are stored based on the received parameter, and if the manager finds a sub-network

that is stored based on the received parameter, the manager retrieves the sub-network (see figure 3A, character 314 and column 10, lines 43-50).

As to claim 20, Pedersen et al. teaches wherein when the manager receives a set of indices, the manager searches the data storage structure to find a set of indices that match the received set of indices, and if the manager finds a matching set, the manager retrieves the sub-network identified by the matching set (see column 11, lines 23-26).

As to claim 21, Pedersen et al. teaches wherein for each particular index pair formed by the received primary index and one of the received secondary indices (see figure 7D, characters 762, 764, 766, and 776),

the manager identifies each sub-network stored in the storage structure that is associated with the particular index pair (see figure 4A-4B and column 11, lines 62-66),

the manager then determines whether any of the identified sub-networks are associated with all the index pairs (see figure 4A-4B and column 11, lines 62-66), and

if so, the manager retrieves any sub-network that is associated with all index pairs (see figure 3A).

As to claim 24, Pedersen et al. teaches wherein at least some sub-networks perform at least tree output functions (see figures 7E-7F and column 16, lines 21-39).



As to claim 25, Pedersen et al. teaches wherein at least some sub-networks perform at least tree output functions (see figures 7E-7F and column 16, lines 21-39).

*Response to Arguments*

4. Applicant's arguments filed 25-March-2005 with respect to the rejected claims in view of the cited references have been fully considered but they are not found persuasive:

In response to applicants' arguments that "Pedersen et al does not teach a data storage structure that stores a plurality of sub-networks, wherein each sub-network performs a set of output functions, wherein each sub-network performs a set of output functions, wherein each sub-network comprises a set of circuit elements and at least some of the sub-network comprise first circuit having a first output outside the sub-network and a second circuit having a second output outside the sub-network, wherein the first circuit receives a direct or indirect input from the second circuit", the arguments have been fully considered but are not deemed persuasive, Pedersen et al. teaches on column 11, lines 44-60 where newly and original synthesized sub-netlist are saved and also at column 11-14 and figures 7A-7F, nodes u and v where sub-netlist perform output function.

*Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §

706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belix M. Ortiz whose telephone number is 571-272-4081. The examiner can normally be reached on Monday-Friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

bmo

May 26, 2005



**SAM RIMELL**  
PRIMARY EXAMINER